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ABSTRACT

The Des Moines (Iowa) Independent Community School District Chapter I Mathematics Program served 1,110 students in grades 2-8. Chapter I Math students in grades two through six achieved gains on the Iowa Tests of Basic Skills from pre to posttesting. Scores on these tests are reported using a metric known as the Normal Curve Equivalent (NCE). The total population of Chapter I students (grades 2-8) who completed both a pre and posttest achieved a gain of 5.6 NCEs in the math composite score. This gain was large enough to attain the criterion specified in the objective. Chapter I math teachers personally contacted 3,047 parents during the year. Creation of a Chapter I data base allowed for entry of enrollment, attendance, parent contact and test data using the computer in 1982-83. While a few problems occurred with initial data entry, it appears that solutions have been worked out and the procedures implemented will result in generation of required data with less teacher time required for data submission. It is recommended that Chapter I math staff examine possible reasons for lower gain scores on the Iowa Tests of Basic Skills attained by students in grades 7 and 8. (Author/BW)

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REPORT OF EVALUATION

Chapter I Mathematics Program

1982-83

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Department of Evaluation and Research
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Approved by: Morris D. Wilson
Morris D. Wilson, Ph.D.
Director of Evaluation and Research

September 21, 1983

TM 830 757

DES MOINES INDEPENDENT COMMUNITY SCHOOL DISTRICT
DEPARTMENT OF EVALUATION AND RESEARCH
EVALUATION ABSTRACT

September 21, 1983

PROJECT TITLE: Chapter I Mathematics Program

COORDINATORS: Kathleen Bullington, Elementary Coordinator
Anita Jones, Secondary Coordinator

STAFF: 1.41 - Coordinators (1.0 elementary, .41 secondary)
27.75 - Teachers (22.25 elementary, 5.50 secondary)
1.20 - Secretary (1.0 elementary, .20 secondary)

OPERATIONAL SITES: Elementary Schools: Brooks, Edmunds-Jefferson, Findley, Garton, Howe, King-Perkins, Longfellow, Lucas, Madison, McKinley, Monroe-Rice, Moulton, Oak Park, Phillips, Stowe, Wallace, Willard
Junior High Schools: Callanan, Harding, Hiatt, Weeks
Nonpublic Schools: All Saints, St. Anthony, Holy Family #1, Holy Family #2, Holy Family #3

POPULATION SERVED: Students in grades 1-8: 1,110
(computed by multiplying number of teaching staff by the designated student load for each teaching position)

FUNDING: Source: Chapter I, Education Consolidation and Improvement Act
Amount Budgeted: $845,168.31
Amount Expended: 832,841.46
Cost Per Pupil: 750.31 (based on 1,110 students)

COMMENTS:

1. Chapter I math students in grades two through six achieved gains on the Iowa Tests of Basic Skills from pre to posttesting. Scores on these tests are reported using a metric known as the Normal Curve Equivalent (NCE). This is a scale statistically similar to the percentile rank scale. Further description of the scale may be found in the full report of evaluation for this program. The total population of Chapter I students (grades 2-8) who completed both a pre and posttest achieved a gain of 5.6 NCEs in the math composite score. This gain was large enough to attain the criterion specified in the objective.

2. Chapter I math teachers personally contacted parents of 85.0 percent of students in grades 1-6 and 73.4 percent of students in grades 7-8 during the first semester. During the second semester, parents of 84.2 percent of all students were contacted. A grand total of 3,047 parent contacts were made during the year.

3. Creation of a Chapter I data base allowed for entry of enrollment, attendance, parent contact and test data using the computer in 1982-83. While a few problems occurred with initial data entry, it appears that solutions have been worked out and the procedures implemented will result in generation of required data with less teacher time required for data submission.

RECOMMENDATIONS:

1. It is recommended that Chapter I math staff examine possible reasons for lower gain scores on the Iowa Tests of Basic Skills attained by students in grades 7 and 8. Due to the lower gains of students at these grade levels in both math and reading, further study of the situation is needed.

2. It is recommended that Chapter I administration work with the Department of Evaluation and Research during 1983-84 to initiate a process that will generate data by computer on objectives introduced and mastered.

3. Attendance data for non-Chapter I students at program buildings should be obtained during the 1983-84 school year. This is necessary in order to compare attendance of Chapter I students to that of non-program students at Chapter I buildings. The Department of Evaluation and Research will insure that this data is obtained at a time when it is easily accessible from the computer.

A copy of the complete Evaluation Report is available upon request from the Department of Evaluation and Research, 1800 Grand Avenue, Des Moines, IA 50307-3382.

I. PROGRAM DESCRIPTION

Chapter I of the Education Consolidation and Improvement Act of 1981 provides financial assistance to local education agencies for programs to meet the special educational needs of educationally deprived children. Children are eligible for the program if they come from areas with high concentrations of low income families and their academic performance is below acceptable levels.

The Des Moines district, utilizing Title I funds, initiated a supplementary reading program during the 1965-66 school year and a supplementary mathematics program during the 1972-73 school year. The impetus for the programs was that there were a significant number of students performing below desired levels on the Iowa Tests of Basic Skills.

In February, 1981, the National Dissemination Review Board awarded exemplary status to the Des Moines Title I Mathematics program (Grades 2-6). This status indicates the program was effective in providing compensatory mathematics services and could be used as a model for other school districts to develop similar programs.

During the 1982-83 school year, the district employed a fulltime equivalent staff of 27.75 teachers and 1.41 coordinators to provide Chapter I mathematics services for Grades 1-8. (The fulltime equivalency for the secondary math coordinator (.41) was computed by using the proportion of the total Chapter I secondary teaching staff comprised of secondary math teachers.) The program was located in 20 public elementary schools, 4 junior high schools and 5 nonpublic schools. Grades served in individual buildings varied according to available space and the organization of the school.

Student Selection

Students were identified according to their performance on the district's objectives based mathematics tests. Students were ranked in order of need according to their scores and a tentative list of students was selected until the scores reached a predetermined criteria or the space allocation for the teacher was filled. Classroom teachers then examined the lists and confirmed or questioned the choices. They judged if a student not on the list needed service or if a student on the list did not need service. For these students the Title Entry Skills Test (TEST) was administered to determine the students' achievement levels and refute/confirm the selection.

Chapter I regulations stipulate conditions under which students cannot be served. These conditions for not selecting students are listed in the Needs Assessment Checklist. Additionally, priorities were established by grade level. Students in the elementary program were selected according to the following order: 2-3-4-1-5-6. In the secondary program the grade order was 7-8.

Major Methods and Activities in the Instructional Program

The basic philosophy underlying the project was that Chapter I students are capable of learning. In applying this principle, the Chapter I staff was responsible for assessing each student's weaknesses and providing remedial instruction in those areas. Weaknesses (and strengths) were identified from the district's mathematics objective based tests, which are based on the district's mathematics objectives for Grades K-8. Each student had an educational plan that was used to guide instruction and to provide a continuous record of concepts introduced and mastered

by the student. The educational plan stays with the student throughout his or her involvement in the Chapter I Mathematics programs.

The primary method of instruction used manipulative devices (blocks, beads, coins, etc.) to develop concepts. As the students recorded the results of their experiments with the manipulatives, they discovered arithmetical algorithms. Games and other activities were used to reinforce the learned concepts.

Organization for Instruction

Chapter I Mathematics teachers worked daily with the identified Chapter I students for approximately one-half of the student's regularly scheduled mathematics class. The actual amount of time the Chapter I teachers instructed each group ranged from 20 minutes to approximately 45 minutes, depending upon grade level and building. A minimum of 100 minutes of instruction per week was required under the local program guidelines. In some cases, Chapter I teachers met with students for the entire math period on an alternating day basis. In schools where scheduling permitted, small group instruction was carried out by the Chapter I teachers in the learner's classroom, however, in most schools children were served outside the classroom. The maximum number of students served by a fulltime teacher was 40. Sizes of groups ranged from 1 to 6 at the elementary level and from 1 to 11 at the secondary level. The average group size at the secondary level was approximately 6.

Parent Contact and Participation

Parents were involved in the program through participation in parent advisory council activities. During the 1982-83 school year, a district council provided a mechanism to disseminate copies of the Chapter I

regulations, program proposals, program evaluations, and information about program learning strategies. The council, whose membership consisted of parents of Chapter I students, teachers (Chapter I and classroom) and community members, also provided a means for parents to make comments and suggestions about the Chapter I program. More information about parent advisory council participation may be found in the Report of Evaluation for the Chapter I Parent Involvement Component.

Parents were also involved by the Chapter I staff through personal contacts. The program teachers visited homes, wrote letters, made telephone calls and encouraged parents to visit Chapter I classes so that they were aware of the Chapter I program and learned of their children's performance in the program.

II. BUDGET AND EXPENDITURES

Figure I indicates the budgeted and expended amounts for the Chapter I Mathematics project for fiscal year 1983. The figures are summarized from data provided by the Chapter I Office (see Appendix A).

Figure I

Chapter I Mathematics Project
Budget and Expenditures (as of June 27, 1983)

Category	Budgeted	Expended
General Administration	$ 30,407.45	$ 27,626.29
Evaluation	14,527.08	14,527.08
Parent Involvement	20,618.41	12,941.23
Indirect Charges	21,828.00	21,828.00
Professional Salaries	610,417.90	609,392.90
Classified Salaries	10,272.92	10,272.92
Fixed Charges	130,344.00	130,344.00
Materials and Supplies	2,190.00	1,967.97
Professional Services	2,549.50	2,417.29
Inservice		
Travel		
Telephone	860.10	711.41
Mileage	1,152.95	812.37
Total	$845,168.31	$832,841.46

The budget information submitted by the Chapter I office for the secondary program included combined figures for reading and mathematics.

In determining the amount of funds allocated and expended for secondary math only, size of teaching staff was considered. Since approximately 41 percent of all secondary Chapter I teachers teach math, this was applied to each category in the budget. In other words, 41 percent of the secondary budget was assumed to be allocated for math. Expenditures were tabulated in the same manner. While this method uses estimation rather than exact figures, it is likely the best system available according to the format in which the data was submitted.

A total of $832,841.46 was expended for the provision of services in the Chapter I math program. This amounted to 98.5 percent of the amount budgeted. Cost per pupil based on an enrollment of 1,110 students was approximately $750.31.

III. RESULTS OF EVALUATION

A total of 14 performance and process objectives prepared by Chapter I administration were evaluated by the Department of Evaluation and Research during the 1982-83 school year. Several other objectives were monitored soley by the program coordinators and are not included in this evaluation report.

An accountability file was prepared for the project to facilitate the collection and storage of supportive data for each objective. A suspense file was used to monitor receipt of the data. Several revisions to objectives in the original proposal were received during the 1982-83 school year. These mainly involved changes in objectives dealing with student performance criteria on the Iowa Tests of Basic Skills. This report evaluates program objectives as revised rather than in their original format. Each objective monitored by the Department of Evaluation and Research is quoted followed by the evaluation for that objective. Comments and recommendations appear at the end of the report.

Administration Process Objective

II B 2. By November 30, 1982, the principal of each elementary school served by the project shall monitor the joint activities of the project teachers and classroom teachers. He/she will visit classrooms to assure that Chapter I students are receiving direct instruction in mathematics from the classroom teacher as well as from the Chapter I teacher.

DOCUMENTATION: report of supervision of the Chapter I program submitted by December 3, 1982, to the Executive Director of Elementary Education (public) or to the Superintendent, Des Moines Diocese (nonpublic).

A copy of the Principal's Report of Chapter I Supervision appears in Appendix B. Principals were to record on the form whether or not they observed instruction being provided to Chapter I students by

classroom teachers. The form lists the name of each classroom teacher, the date and time of the observation and then asks the principal to check whether direct instruction and planning between classroom and Chapter I teachers is occurring. Comments are also solicited.

Report forms were received from principals of all Chapter I schools. The dates on the forms indicated that the observations occurred by November 30, 1982, although several of the forms were received at a later time. In all cases indications were that classroom teachers were providing direct instruction to Chapter I students and also planning with Chapter I teachers to insure Chapter I instructional activities were a supplement to those provided in the classroom. This objective was achieved.

Student Performance Objectives

III A I. At the end of the instruction year, students (grades 2-8) enrolled in the mathematics program for a minimum of 80 days will demonstrate an increase in the mean percentile rank from pre to posttest on the mathematics composite score of the Iowa Tests of Basic Skills.

DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation and Research at the end of the project year.

Table 1 reports pre and posttest results attained by students on the Iowa Tests of Basic Skills. Only students who completed both a pre and posttest were included in the data.

TABLE 1

ITBS/ITED Pre/Post Results (Percentiles)
Total Mathematics Score*

Grade	N	Pretest Percentile	Posttest Percentile	Gain
2	119	19	28	+9
3	154	24	35	+11
4	123	29	40	+11
5	75	21	35	+14
6	82	22	31	+9
7	68	28	32	+4
8	55	30	30	0

*The total mathematics score is a composite score generated by three subtests known as mathematics concepts, mathematics problems and mathematics computation.

As can be seen from Table 1, students at all grade levels demonstrated an increase in mean percentile rank from pre to posttesting with the exception of grade eight. The mean percentile rank for grade eight students remained constant. Additional discussion about student performance on the Iowa Tests of Basic Skills appears under Objectives III A 2, III A 3, and III A 4. This objective was achieved.

III A 2. At the end of the instruction year, students (grades 2-8) will demonstrate a proficiency on the mathematics composite score of the Iowa Tests of Basic Skills such that the average gain in NCEs will be at least 5.0.

DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation and Research at the end of the project year.

III A 3. At the end of the instruction year, students enrolled in the mathematics program for at least 80 days will demonstrate a proficiency on the mathematics composite score of the Iowa Tests of Basic Skills such that the average gain for grades 2-6 in NCE will be at least 6.0.

DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation and Research at the end of the project year.

III A 4. At the end of the instruction year, students enrolled in the mathematics program for at least 80 days will demonstrate a proficiency on the mathematic composite score of the Iowa Tests of Basic Skills such that the average gain for grades 7-8 in NCEs will be at least 3.0.

DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation and Research at the end of the project year.

Objectives III A 2, III A 3, and III A 4 specify various gain criteria for scores on the Iowa Tests of Basic Skills according to the grade level of the students. In these objectives, gains by normal curve equivalent or NCE are specified.

The normal curve equivalent is one of several measurement scales that may be used in reporting test results. The advantage of the NCE scale is that it has the same end and mid points as the percentile rank scale (1, 99, 50) yet has arithmetic properties. This means that the difference between 20 and 24 NCEs has the same meaning as the difference between 10 and 13 NCEs. This particular property has assisted the Chapter I staff in setting goals for determining the amount of achievement that is to occur.

Table 2 reports test data relevant to Objectives III A 2, III A 3, and III A 4.

TABLE 2

ITBS Pre/Post Results (NCEs)
Total Mathematics Score

Grade	N	Pretest NCE	Posttest NCE	Gain
2	119	31.9	37.9	6.0
3	154	35.3	41.8	6.5
4	123	38.3	44.7	6.4
5	75	33.3	41.7	8.4
6	82	33.8	39.8	6.0
7	68	37.5	40.3	2.8
8	55	38.9	38.7	-0.2
2-8 Weighted Average	676	35.4	41.0	5.6

Objective III A 2 states that students across all grades taking the math subtests of the ITBS (grades 2-8) will show a gain in NCEs equal to or greater than 5.0 As the number of students for whom scores were available at each grade level varied, a weighted average was computed. By weighting the average NCE scores according to the number of students whose results contribute to the average at each grade level, some of the measurement error is reduced. As shown by Table 2, the 676 students in grades 2-8 who had both a pretest and posttest score averaged 35.4 on the NCE scale for the pretest and 41.0 on the posttest. As this is an increase of 5.6 NCEs, the objective was achieved. The 676 students completing pre and posttests represented 71.1 percent of the enrollment in Chapter I math (grades 2-8) as reported in March 1983.

Objective III A 3 calls for an average gain of 6.0 NCEs between pre and posttesting of students in grades 2-6. Again, by examining Table 2, it can be seen that this gain criteria was achieved at all grades. Students in grade 5 gained 8.4 NCEs.

Objective III A 4 indicates gain criteria for grades 7 and 8. At these grade levels, a gain criterion of 3.0 NCEs was established. Students at grade 7 attained a gain of 2.8 NCEs while grade 8 students showed a 0.2 NCE loss from pre to posttest. It should be noted that students in 1981-82 also showed a smaller amount of gain at the secondary (grade 7 and 8) level. Furthermore, Chapter I reading students showed a similar decrease in pre/post gain at these grade levels. There was a smaller number of students served at the secondary level as well as a somewhat lower percentage of those served who had both a pre and posttest score for inclusion in the data. Other possible contributing factors to lower gain scores made by secondary students may have included mobility of the population, relationship of the evaluation instrument to the secondary curriculum and the degree of proficiency in test taking skills.

It is recommended that Chapter I math staff examine these and other possible reasons for lower ITBS gain scores at the secondary level. Due to the lower gains of students at the secondary level in both math and reading, further study of the situation is needed. The outcome of the examination in this area should be development of a plan for improving the gain scores exhibited at the secondary level.

III A 5. At the end of the instruction year, at least 55 percent of the first grade students enrolled in the mathematics program at least 80 days will achieve a score above the criteria score used for selection of students for Chapter I services.

DOCUMENTATION: Mathematics Test for Performance Objectives scores submitted to the Director of Evaluation and Research at the end of the project year.

All first grade students in the district complete the Mathematics Test of Performance Objectives in May of each year. Results are used as the primary measure for identifying students eligible to receive service in Chapter I math in second grade. Traditionally, a "cutoff score" has been established by Chapter I each year Students who fall at or below the cutoff score are considered eligible to receive service while those above are not eligible. Beyond determining eligibility, other measures may be used in the actual selection process.

To be eligible for service in Chapter I math during the 1983-84 school year, a second grade student would have to score 28 or less on the 40 item first grade test given in May of 1983. The score is simply the number of correct responses.

The criteria expressed in objective III A 5 also serves as an evaluation measure for first grade Chapter I math students already served since students at this level do not complete the Iowa Tests of Basic Skills. Scores on the first grade test were available for 90 Chapter I math students served 80 days or more in 1982-83. This group of students had an average score of 29.4 on the 40 item test. Average score for the district was 34.8. The cutoff point for service in second grade Chapter I math in 1983-84 is a score of 28 on the first grade math test. To score above the cutoff point, a student would have to score at least 29. The number of Chapter I students scoring above the cutoff point was 55 or 61.1 percent. This objective was achieved.

III A 6. Students (grades 1-8) enrolled into the program a minimum of 80 days will exhibit knowledge of mathematics by demonstrating mastery of 80 percent of the objectives presented to them.

DOCUMENTATION: a completed Student Record Folder for each student served on file in each building and the Educational Plan Summary Report submitted to the project coordinators at the end of each semester.

Individual education plans (IEPs) for Chapter I math students were constructed around the district mathematics objectives. Teachers recorded the attainment of these objectives in each student's IEP. A summary form submitted at the end of the year indicated the number of objectives introduced and mastered by each student.

Table 3 reports by grade level the average number of objectives introduced and the percent of those introduced that were mastered. Only data for students enrolled 80 days or more are included.

TABLE 3

Mathematics Objectives Introduced and Achieved

Grade	N	Average Number of Objectives Per Pupil	Percent Attained
1	111	26	80.1
2	163	36	81.2
3	216	34	82.5
4	174	38	83.6
5	117	40	80.6
6	127	39	83.0
7	147	42	71.7
8	117	52	67.7
1-8	1172	38	78.7

The data in Table 3 indicates that students in grades 1 through 8 mastered 78.7 percent of the objectives introduced. This falls slightly below the specified criterion. It should be noted that students at the elementary level (grades 1-6) achieved the objective while students in grades 7 and 8 did not.

During the 1982-83 school year Chapter I math teachers began reporting both attendance and parent contact data on forms that allowed for computer processing. It is now recommended that Chapter I administration work with the Department of Evalaution and Research to begin a process that will generate data by computer on objectives introduced and

mastered. When this process is implemented completely, the amount of time now required by teachers in reporting this data should be reduced.

III A 7. By the end of the project year, public school students (grades 7-8) enrolled in the program for a minimum of 80 days will display a more positive attitude toward learning than they displayed at the time of their entrance into the program.

DOCUMENTATION: pre and post Attitude Toward Learning summary submitted to the Director of Evaluation and Research at the end of the project year.

Students in the secondary mathematics program completed the Self-Anchoring Attitude Toward Learning Scale in the fall and spring. This inventory, designed to assess attitudes toward learning of individuals in grade five through adult, was developed by staff at the Heartland Area Education Agency. A copy of this instrument appears in Appendix C.

Table 4 shows results from administration of the attitude scale. Only students who completed the scale at both administrations (fall/spring) were included in the data.

TABLE 4
Attitude Toward Learning
Survey Results

School	N	Pre Mean	Post Mean	Gain
Callanan	21	6.52	7.43	+0.91
Harding	33	6.42	7.15	+0.73
Hiatt	34	5.94	7.00	+1.06
Weeks	19	5.37	6.11	+0.74
All Schools	107	6.10	6.97	+0.87

Students at each building demonstrated a gain in mean score from pre to post administration of this instrument. The overall gain for a total of 107 students was .87. This compares to a gain of .79 on the same instrument by students during the previous year. This objective was achieved.

III A 8. During the project year, public school students (grades 7-8) enrolled in the program for a minimum of 80 days will respond positively to the program as indicated by their rate of attendance being equal to or greater than that of all non-Chapter I students in the same schools.

DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted with the May accountability data to the secondary coordinator and the Director of Evaluation and Research.

During the 1982-83 school year attendance data for Chapter I students in program classes was for the first time generated by computer. Teachers reported attendance data on the same form as was used to report parent contact information. An attendance rate was calculated based on the number of days a student attended his/her Chapter I class compared to the number of days of possible attendance.

It was the intent of this objective to compare the rate of attendance of Chapter I students to that of nonprogram students at the same buildings. Unfortunately, the request necessary to produce the data for nonprogram students was not forwarded to the appropriate person until it was too late to produce the necessary data.

Due to the above situation, evaluation of this objective as stated was not possible. It was found, however, that rate of attendance on <u>all</u> students at Chapter I buildings was available as part of a report issued by the Educational Services Division. While comparing attendance of program students against the attendance of all students at Chapter I

buildings (including Chapter I students) is not entirely valid, the comparison may still be useful for examining attendance rates.

Table 5 shows attendance data as discussed in the last paragraph.

TABLE 5

Secondary School Attendance Results

School	N	Title I Students Attendance Percent	N	All Students Attendance Percent
Callanan	36	96.5	546	94.0
Harding	76	87.9	548	91.7
Hiatt	61	74.2	635	91.8
Weeks (grade 7-8)	36	90.7	601	92.6
Total	209	86.0	2330	92.5

As shown by Table 5, a lower attendance rate occurred among Chapter I students than did for the "all students" group at secondary Chapter I buildings except at Callanan. At that building, Chapter I students had a better attendance rate than did all students.

As this objective could not be evaluated as it was written, no further commentary is offered regarding the results. It is recommended that in 1983-84 the Department of Evaluation and Research make certain that the request necessary to make the appropriate data available when needed be made in a timely manner. This will insure an accurate comparison between Chapter I/non-Chapter I student attendance rates.

Instructional Process Objectives

IV B 1. The project teacher(s) in each building served by the program will identify eligible student participants by September 9, 1983.

DOCUMENTATION: class lists of identified students and the eligibility checklist submitted to the project coordinator with the September accountability data.

Chapter I math staff selected students for participation in this program by the date specified in the objective. As with several other forms of data, class lists of students were produced by the computer during the 1982-83 school year. In order to enroll a student in the program, teachers completed and sent to the Chapter I office a pupil information form. This essentially entered the student in the data base for Chapter I. Deletion of students was handled in a similar manner. Once the initial entry of the pupil information forms was complete, the class list of students could be generated for each teacher.

As 1982-83 was the first year that this sytem was used, some problems were encountered in generating the class lists. In fact, March 1983 was the first time that an accurate class list was produced. For this reason, Table 6 indicates the number of students served by building and grade level derived from class lists produced in March.

TABLE 6

Number of Students Served
Chapter I Mathematics

School	Grade Level 1	2	3	4	5	6	7	8	Total
All Saints	--	3	2	1	2	2			10
Brooks	9	1	6	18	13	7			54
Edmunds	--	--	--	14	15	10			39
Findley	3	6	7	2	8	12			38
Garton	5	4	12	4	6	9			40
Holy Family #1	--	2	7	4	2	--			15
Holy Family #2	5	5	7	3	3	--			23
Holy Family #3						9	6	5	20
Howe	7	11	11	10	--	1			40
Jefferson	--	23	12	1	--	--			36
King	10	15	14	1	--	--			40
Longfellow	8	4	11	6	5	5			39
Lucas	5	8	8	16	3	--			40
Madison	1	6	6	4	--	--			17
McKinley	3	4	4	8	--	--			19
Monroe	--	--	--	14	12	12	-	-	38
Moulton	10	12	19	14	16	7			78
Oak Park	2	3	5	3	--	--			13
Perkins	--	--	--	12	14	14			40
Phillips	6	6	10	3	2	6	7		40
Rice	15	16	8	-	--	--			39
St. Anthony	--	4	6	5	--	--			15
Stowe	6	--	16	9	5	4			40
Wallace	1	6	18	10	4	--			39
Willard	4	11	9	8	2	6			40
Callanan							19	18	37
Harding							32	36	68
Hiatt							34	26	60
Weeks						2	18	14	34
All Schools	100	150	198	170	112	106	116	99	1051

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IV B 4. By the end of the first semester, Chapter I mathematics teachers will have had personal conferences at home or a place selected by the parent of at least 80 percent of the total number of students grades 1-6 enrolled in the program for a minimum of 20 days.

DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted to the appropriate project coordinator, the building principal, and the Department of Evaluation and Research with the January accountability data.

IV B 5. By the end of the first semester, project teachers will have personal contact with parents at home or a place selected by the parent(s) of at least 65 percent of the total number of students (grades 7-8) enrolled in the program for a minimum of 20 days.

DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted to the appropriate project coordinator, the building principal, and the Department of Evaluation and Research with the January accountability data.

IV B 6. By the end of the second semester each project teacher will have had a personal conference (at home, school, or by telephone) with the parent(s) of at least 80 percent of the total number (grades 1-8) of students whom he/she has served a minimum of 20 days the second semester.

DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted to the appropriate project coordinator, the building principal, and the Department of Evaluation and Research with the May accountability data.

Objectives IV B 4, IV B 5 and IV B 6 concern contacts with parents made by Chapter I teachers. The three objectives specify different criteria for the minimum number of parents to be contacted depending on the grade level of the student. There is also a difference between the fall and spring semesters in the type of contacts that may be counted toward achievement of the objective. During the first semester, contacts must be made by the Chapter I teacher visiting the home or through a visit by the parent to school for a conference, classroom

visit or other activity. Telephone calls or letters sent home by the Chapter I teacher are not categorized as personal contacts during the first semester. During the second semester, the criterion is the same except that telephone calls are considered personal contacts.

Tables 7 and 8 present the data necessary for evaluation of objectives IV B 4, IV B 5, and IV B 6. Table 7 applies to Objectives IV B 4 and IV B 5 while Table 8 applies to Objective IV B 6.

TABLE 7

Parent Contacts - First Semester

Grade	Number of Students	Number Contacted Personally	Percent Contacted Personally
1-6	924	785	85.0
7-8	244	179	73.4

TABLE 8

Parent Contacts - Second Semester

Grade	Number of Students	Number Contacted Personally	Percent Contacted Personally
1-8	1087	915	84.2

According to the information presented in Table 7 and 8, all three parent contact objectives for Chapter I math students were achieved. During the first semester parents of 85.0 percent of the students in grades 1-6 and 73.4 percent of those in grades 7-8 were contacted personally at home or school. The criterion levels expressed in objectives IV B 4 and IV B 5 were 80 and 65 percent respectively. During the second semester, parents of 84.2 percent were contacted personally at home, school or by telephone. The criterion level for second semester

contacts was 80 percent. A total of 3,047 contacts were made during the 1982-83 school year.

Family Process Objective

VII A 1. Near the end of the project year parents of identified Chapter I students will respond positively to the project activities.

DOCUMENTATION: a summary of responses obtained by the Department of Evaluation and Research on the parent questionnaire.

Responses to the parent questionnaire are reported in the Report of Evaluation for the Chapter I Parent Involvement Component.

During the 1983-84 school year, parent involvement as a distinct component of the Chapter I program will cease to exist. When that happens, several objectives to be used for evaluation of parent activities including the questionnaire will be reported and discussed separately in the reading and mathematics reports.

COMMENTS

1. Chapter I math students in grades two through six achieved gains on the Iowa Tests of Basic Skills from pre to posttesting. Scores on these tests are reported using a metric known as the Normal Curve Equivalent (NCE). This is a scale statistically similar to the percentile rank scale. Further description of the scale may be found in the full report of evaluation for this program. The total population of Chapter I students (grades 2-8) who completed both a pre and posttest achieved a gain of 5.6 NCEs in the math composite score. This gain was large enough to attain the criterion specified in the objective.

2. Chapter I math teachers personally contacted parents of 85.0 percent of students in grades 1-6 and 73.4 percent of students in grades 7-8 during the first semester. During the second semester, parents of 84.2 percent of all students were contacted. A grand total of 3,047 parent contacts were made during the year.

3. Creation of a Chapter I data base allowed for entry of enrollment, attendance, parent contact and test data using the computer in 1982-83. While a few problems occurred with initial data entry, it appears that solutions have been worked out and the procedures implemented will result in generation of required data with less teacher time required for data submission.

RECOMMENDATIONS

1. It is recommended that Chapter I math staff examine possible reasons for lower gain scores on the Iowa Tests of Basic Skills attained by students in grades 7 and 8. Due to the lower gains of students at these grade levels in both math and reading, further study of the situation is needed.
2. It is recommended that Chapter I administration work with the Department of Evaluation and Research during 1983-84 to initiate a process that will generate data by computer on objectives introduced and mastered.
3. Attendance data for non-Chapter I students at program buildings should be obtained during the 1983-84 school year. This is necessary in order to compare attendance of Chapter I students to that of non-program students at Chapter I buildings. The Department of Evaluation and Research will insure that this data is obtained at a time when it is easily accessible from the computer.

A P P E N D I X A

Chapter I Mathematics
Budget and Expenditures

Elementary Mathematics *
1982-83

		Budgeted	Expended
General Administration		24,239	22,022
Evaluation		11,580	11,580
Parent Involvement		16,436	10,316
Indirect Charges		17,400	17,400
Professional Salaries		473,687	473,687
1 Coordinator	469,687		
22.15 teachers			
Substitutes	4,000		
Classified Salaries		8,382	8,382
1 Secretary			
Fixed Charges		101,234	101,234
Materials and Supplies		1,780	1,592
Professional Services		1,750	1,692
Inservice			
Travel			
Telephone		610	506
Mileage		745	543
	Total	657,843	648,954

Cost per student $732

* Data as of June 27, 1983

A P P E N D I X B

Principal's Report of Chapter I Supervision

PRINCIPAL'S REPORT OF CHA R 1 SUPERVISION

On Coordination of Classroom Teachers' and
Chapter 1 Teacher's Instruction

School _____

Date _____

Classroom Teacher	OBSERVATION		Direct Instruction to Chapter 1 Students		JOINT PLANNING		COMMENTS:
	Date	Time	Yes	No	Yes	No	

Due: by December 3, 1982
Public Schools: 1 copy to Executive Director of Elementary Education, 1 copy file
Parochial Schools: 1 copy Sister Jude Fitzpatrick, 1 copy Department of Evaluation, 1 copy file.

Principal's Signature

APPENDIX C

Self-Anchoring Attitude (Toward Learning) Scale

INSTRUCTIONS FOR THE ADMINISTRATION OF SAAS: SELF-ANCHORING ATTITUDE SCALE (TOWARD LEARNING)

INTRODUCTION

The Self-Anchoring Attitude Scale (Toward Learning) is an inventory designed to assess attitudes toward learning of individuals in Grade 5 through adult. SAAS is unique in that each individual is asked to describe the end-points of the dimension under examination -- in this case attitude toward learning. This self-defined continuum is then used as a measuring device with no further verbal cues.

DIRECTIONS

Check that all students have a pencil or a pen and one blank sheet of paper. To get off to a good start, it is suggested to say something like this.

> *"Today I am going to ask you about students who like to learn and students who dislike to learn. I am interested in your ideas. This is not a test. There are no right or wrong answers.*
>
> *Not all students are the same. You may feel that some enjoy learning more than others. You may know students who like to learn and students who do not like to learn. Without saying anything to each other, spend the next 3-5 minutes thinking of what you would say about students who like to learn. To help you remember your ideas, write them down on the sheet of paper in front of you."*

Allow 3-5 minutes for the students to complete this. When you are satisfied that they are finished, ask them to spend the next few minutes thinking of what they would say about students who dislike to learn. They can use the other side of the paper to jot down their ideas.

When they are finished, distribute the SAAS form to each student with the "ladder" side showing. Ask them to write their ideas for "Students Who Like to Learn" at the top of the page in the space provided and their ideas for "Students Who Dislike to Learn" at the bottom of the page.

After all students have finished writing, say to the students:

"At the left side of your paper is a picture of a ladder Your description of students who like to learn is located at the top of the ladder and your description of students who dislike to learn is at the bottom.

You may be at the top of the ladder -- that is, a student who likes to learn. Or you may be at the very bottom of the ladder -- a student who dislikes to learn. Quite possibly you are somewhere in between those who like to learn and those who dislike to learn.

Take your pencil and mark an "X" on the rung of the ladder where you think you are right now."

When you are satisfied that all students have finished, ask them to write in their name, school, grade, and the day's date in the space provided above the ladder. Also, have them write in their name in the top right hand corner of the form in the space provided.

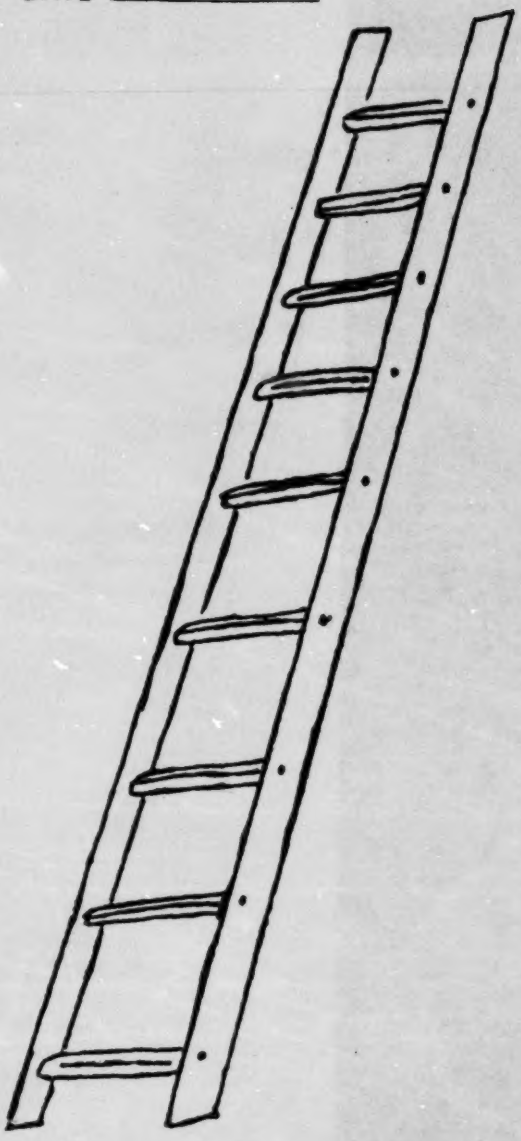
Collect all the SAAS forms.

NAME _____

SCHOOL _____

GRADE _____

DATE _____



STUDENTS WHO LIKE TO LEARN

_____

_____

_____

_____

_____

STUDENTS WHO DISLIKE TO LEARN

_____

_____

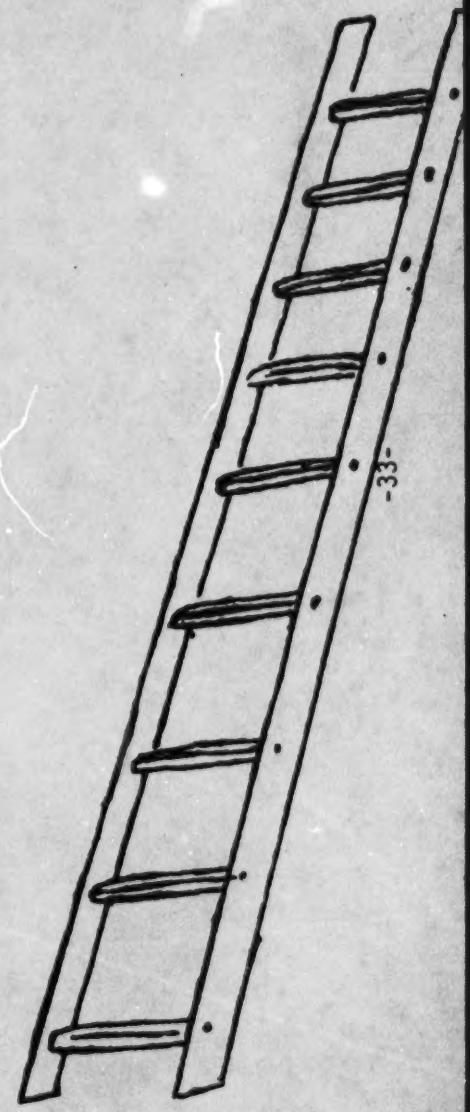
_____

_____

_____

NAME _____

SCHOOL _____

GRADE _____

DATE _____